

Date: Tuesday, 1/8/2008 1:20:00 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BRACKET ASSEMBLY	
Job Number	: 36663 -				
Estimate Number	: 10278				
P.O. Number	:		Part Number	: D3121141	
This Issue	: 1/8/2008	S.O. No. :	Drawing Number	: D3121 REV E	
Prsht Rev.	: NC		Project Number	: N/A	
First Issue	: / /	Type : MACHINED PARTS	Drawing Revision	: E	
Previous Run	: 36629		Material	:	
Written By	:	10	Due Date	: 2/15/2008	Qty: 12
Checked & Approved By	: 108.01.08			10	Um: Each
Comment	: Est Rev: Pick:A 04.02.18 New issue KJ/DS Est Rev:B ECN 1060 07-11-12 DD verified by: EC				

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	M174B1000X02000	17-4 SS Bar	
		Comment: Qty.: 0.5775 f(s)/Unit Total : 23.1000 f(s) Material: 17-4 SS Bar per AMS 5604/5643 (M17-4-B1.000x02.000) Identify for D3121-111 Batch: 1102476	8.F 08/02/09
2.0	BAND SAW	BAND SAW	
		Comment: BAND SAW Cut blanks: (1.000" x 2.000") 6.600" long	8.F 08/02/09
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1	
		Comment: HAAS CNC VERTICAL MACHINING #1 1-Machine D3121-111 as per Folio FA361 and Dwg D3121 Identify as D3121-111 2-Deburr 3-Scribe batch number	PRO 8.F 08/02/09
4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE	
		Comment: INSPECT PARTS AS THEY COME OFF MACHINE	8.F 08/02/09

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 36663

Part Number: D3121141

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

08/02/12

(12)

6.0 D312121 Bolt



Comment: Qty.: 1.0000 Each(s)/Unit Total : 40.0000 Each(s)

Pick:

Qty Part Number Description Batch  
1 D3121-21 Bolt B36668 X 12 parts.

DIP 08/02/12

(12)

7.0 D3121241 Bearing Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total : 40.0000 Each(s)

Pick:

Qty Part Number Description Batch  
1 D3121-241 Bearing Ass B34523 X 3 parts B36669 X 9 parts DIP 08/02/12

(12)

8.0 SMALL FAB 1 SMALL &amp; MEDIUM FAB RESOURCE 1



Comment: SMALL &amp; MEDIUM FAB RESOURCE 1

Assemble D3121-141 as per Dwg D3121.

DIP 08/02/12

(12)

9.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

✓ 08/02/12 (12)

10.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST233

AS 08/02/13 (12)

11.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/02/13 (12)

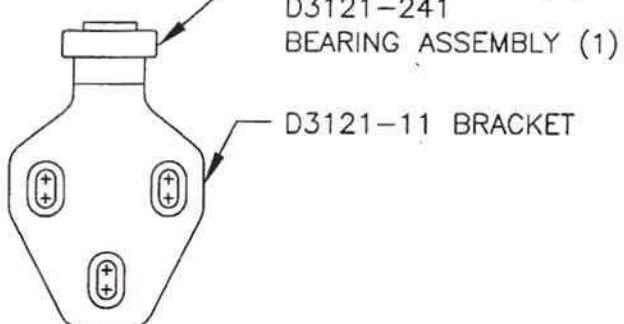
Job Completion



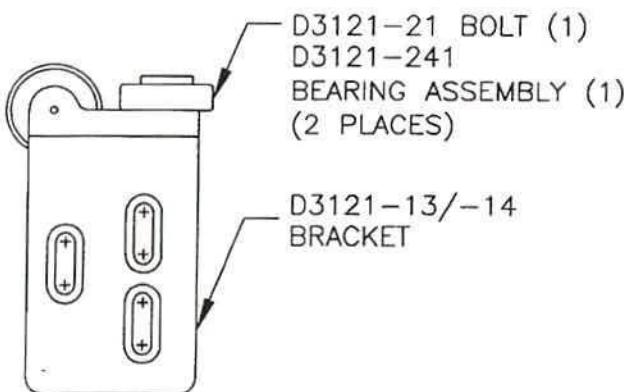
U 08/02/13

**DART**

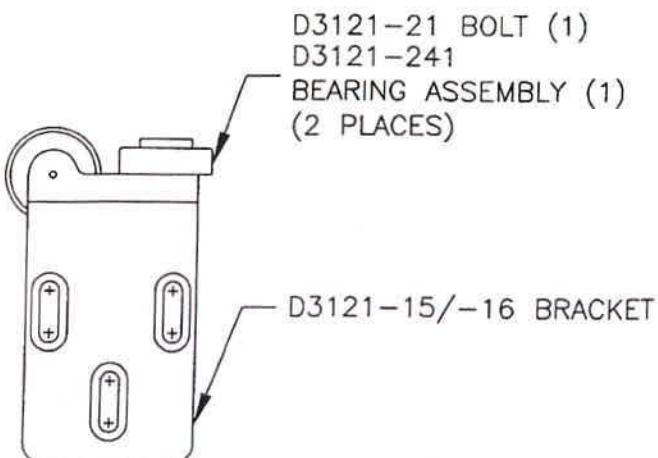
DESIGN <i>A</i>	DRAWN BY <i>CE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>A</i>	APPROVED <i>W</i>	DRAWING NO. D3121	REV. E SHEET 1 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2
A	02.04.15	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146	
C	04.02.17	ADD CLEARANCE; USE -241 BEARING	
D	06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000	
E	07.11.07	ADD TOLERANCE TO 0.032 (DETAIL B)	

**RELEASED**  
*07.11.07 W*

**D3121-041 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-33)



**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)  
BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-37/-38)



**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)  
BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-35/-36)

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *36663*

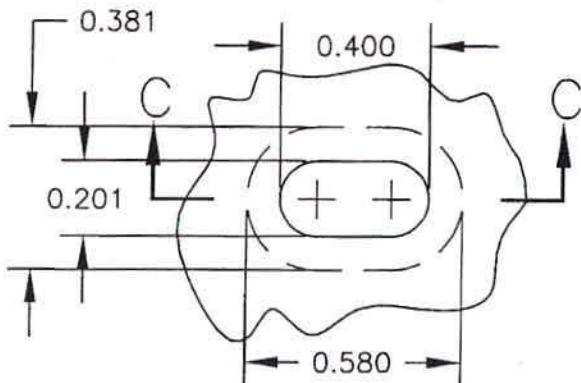
Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

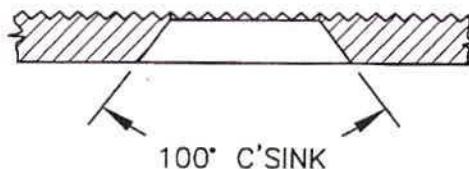
**DART**

DESIGN <i>4</i>	DRAWN BY <i>CE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>4</i>	APPROVED <i>-H</i>	DRAWING NO. D3121	REV. E SHEET 3 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:1

**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED

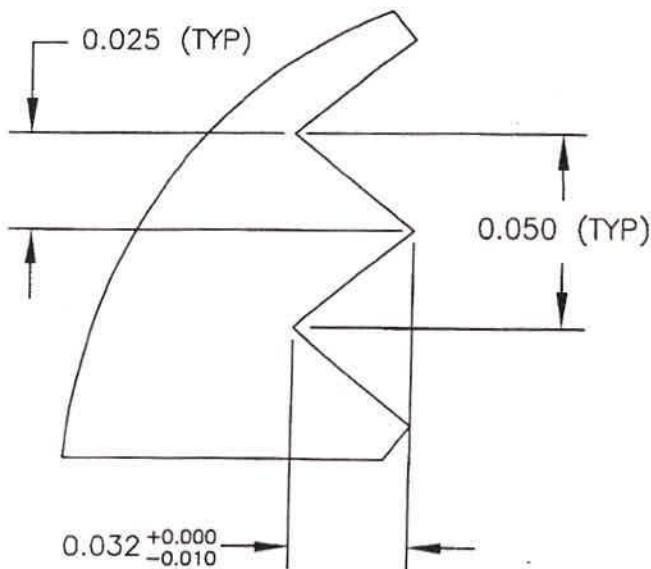


**SECTION  
C-C**



**RELEASED**  
07.11.07 *W*

**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



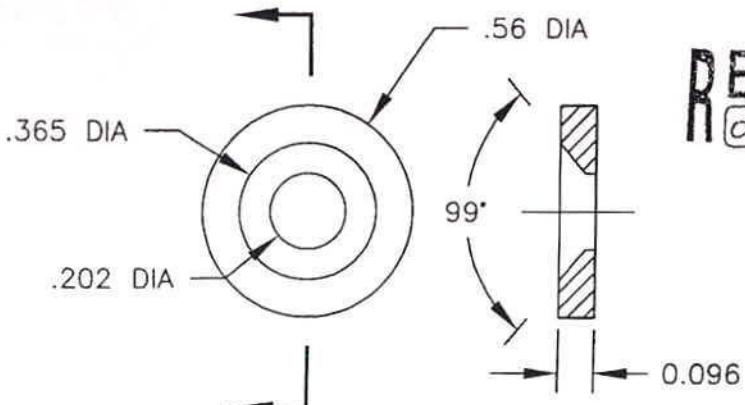
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *36663*

Copyright © 2002 by DART AEROSPACE LTD

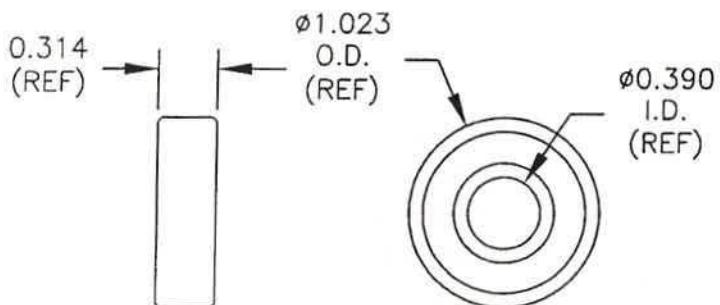
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

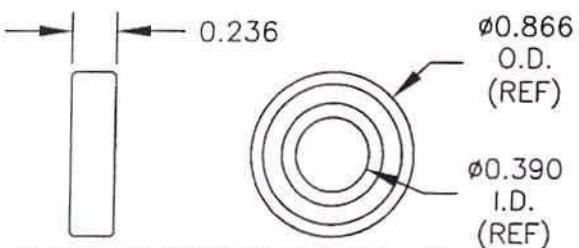
DESIGN	DRAWN BY	DART AEROSPACE LTD	
CHECKED	APPROVED	DRAWING NO.	REV. E
		D3121	SHEET 10 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:1

**D3121-17 WASHER (SCALE 2:1)**

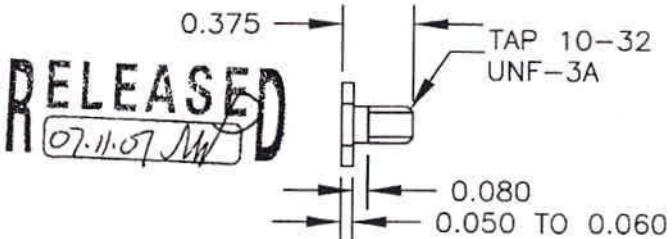
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

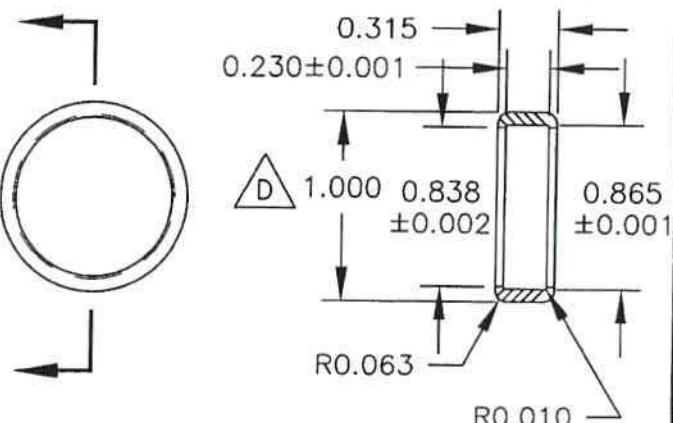
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM  
FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

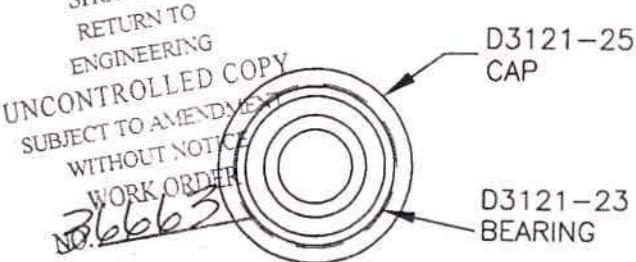
- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z  
OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

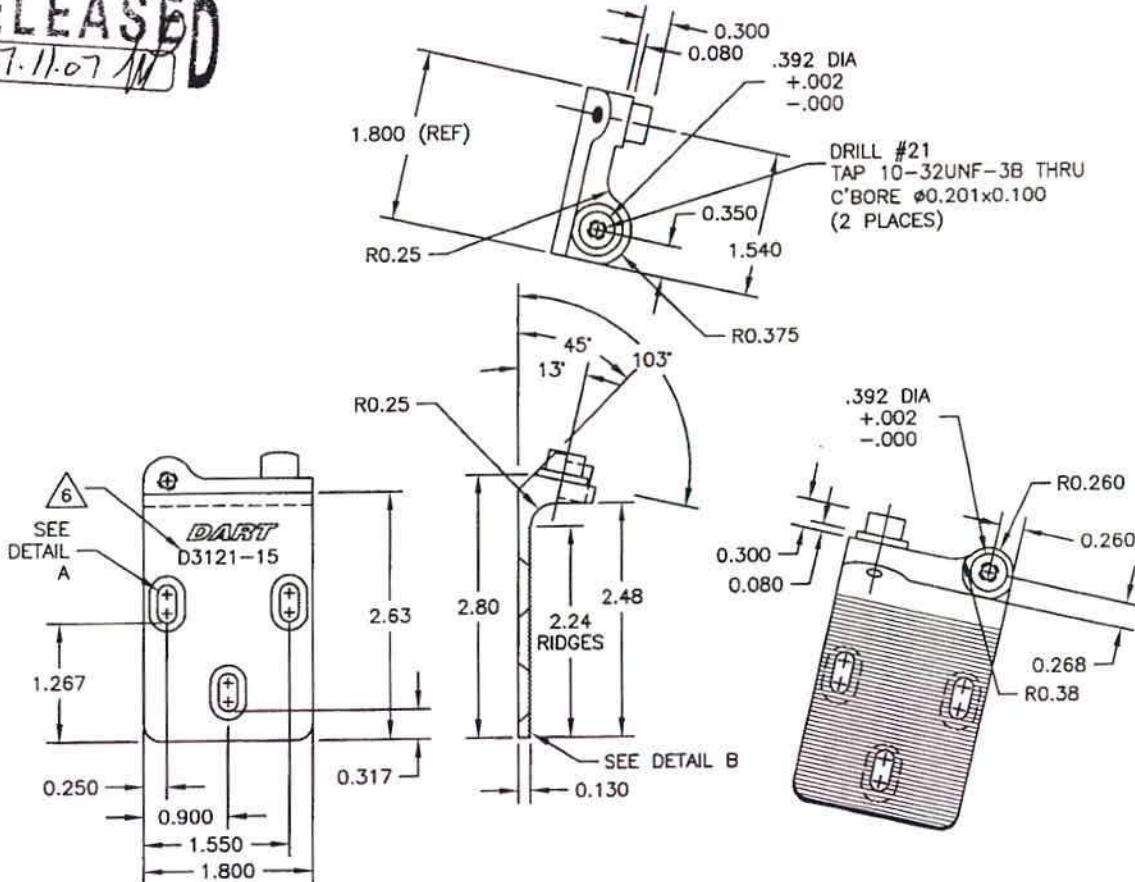
**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3121
DATE		REV. E SHEET 6 OF 10 SCALE 1:2 TITLE BRACKET ASSEMBLY

**RELEASED**  
07.11.07**D3121-15 BRACKET (SHOWN)****D3121-16 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 36663

DART AEROSPACE LTD

Work Order:

36663

Description: Bracket

Part Number:

D3121-111

Inspection Dwg: D3121

Rev: PE

08/01/09

Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

 First Article  Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.392	+0.002/-0.000	.392	/			
0.75	+/-0.030	.751	/			
0.375	+/-0.010	.376	/			
2.14	+/-0.030	2.140	/			
0.950	+/-0.010	.952	/			
0.600	+/-0.010	.609	/			
1.96	+/-0.030	1.962	/			
0.280	+/-0.010	0.287	/			
3.330	+/-0.010	3.330	/			
3.630	+/-0.010	3.635	/			
R0.25	+/-0.030	R.250	/			
R0.375	+/-0.010	R.375	/			
Ø0.201	+0.005/-0.000	.204	/			
0.100	+/-0.010	.1000	/			
4.580	+/-0.010	4.575	/			
6.18	+/-0.030	6.183	/			
5.89	+/-0.030	5.895	/			
0.080	+/-0.010	.078	/			
0.300	+/-0.010	.301	/			
30°	+/-0.1°	30°	/			
R0.25	+/-0.030	R.250	/			
0.130	+/-0.010	.128	/			
0.381	+/-0.010	.389	/			
-0.281 0.201	+/-0.010	.204	/			
0.400	+/-0.010	.404	/			
0.580	+/-0.010	.584	/			
100°	+/-1°	100°	/			
0.032 0.022	+0.006 -0.010	.031	/			

Measured by:

Date:

SF

08/02/09

Audited by:

Date:

JML

08/02/12

Prototype Approval:

N/A

Date:

N/A

Rev

A

Date

04.01.12

Change

New Issue

P/O D3121-141

Revised by

KJ/RF

B

04.05.05

Dimensions changed/re-arranged per Dwg revision

KJ/JLM

C

06.06.14

Dwg Rev. updated

KJ/JLM